

What we claim is:

SUB BY

1. A method of tracking changes to the content of at least one database, comprising the steps of:

- (1) storing data in a database;
- (2) performing a plurality of loads to said database; and
- (3) undoing at least one of said plurality of loads;

wherein the resulting content of the database reflects the data as if the undone load had not been performed.

2. The method of claim 1, further comprising the step of:

(4) ignoring step (2) such that the resulting content of the database reflects data as if the previously undone loading step did occur.

3. The method of claim 1, wherein the load data comprises a load table and the database comprises a target table.

4. The method of claim 3, wherein a table structure of a table in a first load is different from a table structure of a table in a second load.

5. The method of claim 3, wherein the database table rows and the load table rows are correlated via a primary key.

6. The method of claim 5, wherein performing a load in step (2) comprises the steps of:

- i. inserting rows into the target with new key values;
- ii. updating rows in the target table with existing key values; and
- iii. deleting rows from the target table when a row's key value does not exist in the load table.

7. The method of claim 6, wherein during step (2) i., when inserting a row with a primary key which at some point in the past was deleted prior to said load, those columns for

which the load does not contain data are set to the values that they had when the row was last deleted

8. The method of claim 3, comprising the step of:

(4) recording information in a second table, separate from said target table, wherein said information corresponds to each modification made to said target table.

9. The method of claim 8, comprising the step of:

(5) reconstructing a load sequence of said target table as it existed just before a load retraction.

10. The method of claim 9, further comprising the step of:

(6) reconstructing a historical state of said target table at a discrete time in said load sequence, wherein said reconstructing is performed based at least in part on the information in the second table.

11. A system for tracking changes to the content of at least one database, comprising:
a processor; and
a memory;

wherein in the memory is stored a database and computer readable instructions such that when the computer readable instructions are executed by the processor the system is adapted to perform the steps of:

- (1) storing data in a database;
- (2) performing a plurality of loads to the database; and
- (3) undoing at least one of said plurality of loads;

wherein the resulting content of the database reflects the data as if the undone load had not been performed.

12. The system of claim 11, wherein the computer readable instructions further cause the system to perform the step of:

(4) ignoring step (2) such that the resulting content of the database reflects data as if the previously undone loading step did occur.

13. The system of claim 11, wherein the load comprises a load table and the database comprises a target table.

14. The system of claim 13, wherein a table structure of a table in a first load is different from a table structure of a table in a second load.

15. The system of claim 13, wherein the database table rows and the load table rows are correlated via a primary key.

16. The system of claim 15, wherein performing a load in step (2) comprises the steps of:

- i. inserting rows into the target with new key values;
- ii. updating rows in the target table with existing key values; and
- iii. deleting rows from the target table when a row's key value does not exist in the load table.

17. The system of claim 16, wherein during step (2) i., when inserting a row with a primary key which at some point in the past was deleted prior to said load, those columns for which the load does not contain data are set to the values that they had when the row was last deleted.

18. The system of claim 13, wherein the computer readable instructions further cause the system to perform the step of:

(4) recording information in a second table, separate from said target table, wherein said information corresponds to each modification made to said target table.

19. The system of claim 18, wherein the computer readable instructions further cause the system to perform the step of:

(5) reconstructing a load sequence of said target table as it existed just before a load retraction.

20. The system of claim 19, wherein the computer readable instructions further cause the system to perform the step of:

(6) reconstructing a historical state of said target table at a discrete time in said load sequence, wherein said reconstructing is performed based at least in part on the information in the second table.

21. A computer readable medium storing computer readable instructions that, when executed by a processing unit, cause a data processing device to track changes to the content of at least one database by performing the steps of:

- (1) storing data in a database;
- (2) performing a plurality of loads to said database; and
- (3) undoing at least one of said plurality of loads;

wherein the resulting content of the database reflects the data as if the undone load had not been performed.

22. The computer readable medium of claim 21, wherein the computer readable instructions further cause the data processing device to perform the step of:

(4) ignoring step (2) such that the resulting content of the database reflects data as if the previously undone loading step did occur.

23. The computer readable medium of claim 21, wherein the load data comprises a load table and the database comprises a target table.

24. The computer readable medium of claim 23, wherein a table structure of a table in a first load is different from a table structure of a table in a second load.

25. The computer readable medium of claim 23, wherein the database table rows and the load table rows are correlated via a primary key.

26. The computer readable medium of claim 25, wherein performing a load in step (2) comprises the steps of:

- i. inserting rows into the target with new key values;
- ii. updating rows in the target table with existing key values; and
- iii. deleting rows from the target table when a row's key value does not exist in the load table.

27. The computer readable medium of claim 26, wherein during step (2) i., when inserting a row with a primary key which at some point in the past was deleted prior to said load, those columns for which the load does not contain data are set to the values that they had when the row was last deleted.

28. The computer readable medium of claim 23, wherein the computer readable instructions further cause the data processing device to perform the step of:

- (4) recording information in a second table, separate from said target table, wherein said information corresponds to each modification made to said target table.

29. The computer readable medium of claim 28, wherein the computer readable instructions further cause the data processing device to perform the step of:

- (5) reconstructing a load sequence of said target table as it existed just before a load retraction.

30. The computer readable medium of claim 29, wherein the computer readable instructions further cause the data processing device to perform the step of:

- (6) reconstructing a historical state of said target table at a discrete time in said load sequence, wherein said reconstructing is performed based at least in part on the information in the second table.